

REMARKS

Reconsideration and allowance of the present application are respectfully requested. Claims 28, 32, 41, 43, and 53-95 remain pending in the application. Claims 28, 32, 41, 43, 53, 55, 57, 68, 80, 83, 86, 89 and 92 are independent claims. By the foregoing amendment, claim 28 is amended; and claims 92-95 are added. No new matter is added.

Applicants acknowledge with appreciation the Examiner's indication that claims 32, 55 and 56 are allowed (paragraph 8 of the final Office Action), and the indication that claims 66, 67, 78 and 79 contain allowable subject matter (paragraph 9 of the final Office Action).

Claim 28 is amended to distinctly identify a recorded sound effect which is separate from the three variables. Claims 92-94 are added to recite a computer-readable medium containing programming code for providing user feedback in a graphical user interface for a computer comprising features functionally parallel to the features encompassed by the method claims (claims 89-91). Claim 95 is added to recite the computer-readable medium of claim 29, wherein each of the recited segments can be adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect. No new matter is added.

In paragraph 4, pages 2-5 of the final Office Action, claims 28, 53, 54, 57, 58, 61-64 and 80-91 stand rejected as being unpatentable over U.S. Patent No. 6,049,328 (Vanderheiden) in view of U.S. Patent No. 5,890,116 (Itoh et al.). In paragraph 5, pages 6-8 of the final Office Action, independent claims 41 and 43 stand rejected as being unpatentable over U.S. Patent No. 5,374,924 (McKiel, Jr.) in

view of the Itoh et al. patent. In paragraph 6, pages 8-11 of the final Office Action, claims 59, 60, 65 and 68-77 stand rejected as being unpatentable over the Vanderheiden patent and the Itoh et al. patent in view of the McKiel, Jr. patent. These rejections are respectfully traversed.

Applicants have disclosed a method for providing sound effects in which, among other disclosed features, an output characteristic of a sound effect can be varied using a data structure which includes variable parameters associated with at least one of gain, delay and pitch of an identified sound (e.g., page 8, and specifically at lines 18-28). Applicants have further disclosed that frequency variation can be introduced to provide some auditory variety in both the one-shot and looping sound effects (e.g., page 11, lines 14-16). Accordingly, a common identified sound can be varied to produce different sound effects for different state transitions by varying one or more of these output parameters (page 8, lines 24-26). Advantageously, small adjustments in a recorded sound effect can be made without actually re-recording the effect (page 8, lines 26-28).

Applicants have further disclosed dividing drag sounds into three segments: an attack segment, a sustain segment and a decay segment, which segments can be recorded separately and identified individually in the loaded theme data file or in the code which runs the theme (e.g., page 9, lines 22-25). Applicants have further disclosed that the attack segment is played first to initiate the drag operation (e.g., page 9, lines 25-26). Then, the sustain segment is repeated while the drag operation continues. Once the drag operation terminates, the decay segment is played to gradually transition out the sound effect associated with this drag operation. As with the one-shot sound effects, the looping sound effects can also be

adjusted by gain, delay and pitch variables which can be individually established for each effect (e.g., page 10, lines 2-4).

Claims 89-94

Claim 89 recites that the display of a user interface element changes states in response to a user action performed on that element and, in conjunction therewith, a sound effect associated with that change in display states is reproduced. Further, claim 90 recites the method of claim 89, wherein values for variable parameter are used for reproducing said identified sound effect (e.g., page 8, lines 21-24). Claim 91 recites the method of claim 90, wherein using the same stored sound effect, different values are used for different transitions (e.g., page 8, lines 25 and 26). The Vanderheiden patent and the Itoh et al. patent, individually or in combination as suggested by the Examiner, would not have taught or suggested at least these claimed features.

Claims 92-94 are added to recite a computer-readable medium containing programming code for providing user feedback in a graphical user interface for a computer comprising features functionally parallel to the features encompassed by the method claims (claims 89-91). No new matter is added.

With respect to claims 89 and 92, the Vanderheiden patent discloses reproduction of sounds in connection with the movement of a user's finger across the surface of a touch screen. It does not, however, disclose that sounds accompany changes in the display state of a user interface element when a user performs an action with respect to that element. Even if the user's finger movement across the surface of a touch screen is considered to be performing of an action, 1) the movement is not an action with respected to an identified element; and 2) there is no

display state that is subject to transition. The Vanderheiden patent would not have taught or suggested changing the display of said element from a first state to a second state in response to a user action that is performed with respect to an element of the graphical user interface; identifying a stored sound effect that is associated with a transition from said first state to said second state; and reproducing said identified sound effect in conjunction with said change in display states of said element, as recited in claims 89 and 92.

The Itoh et al. patent does not cure the deficiencies of the Vanderheiden patent. The Itoh et al. patent relates to sound playback in a conduct-along operation, wherein sound playback and image display are changed real-time following the updated parameters (col. 5, lines 11-20). The disclosed conduct-along operation relates to control of tempo, beat timing, accent and sound volume by analyzing the conducting graphic form produced by the trajectory of a mouse cursor (col. 5, lines 41-43). The Itoh et al. patent does not relate to changing the display of said element from a first state to a second state in response to a user action that is performed with respect to an element of the graphical user interface; identifying a stored sound effect that is associated with a transition from said first state to said second state; and reproducing said identified sound effect in conjunction with said change in display states of said element, as recited in claims 89 and 92.

There is no motivation to combine the Vanderheiden patent and the Itoh et al. patent. The Vanderheiden patent is directed to a specially arranged touch screen system for people with disabilities. The Itoh et al. patent is directed to a conduct-along system that can give expression to sounds and images. There is no suggestion for one to combine with another.

Thus, independent claims 89 and 92 are allowable. The applied references, when considered individually or in combination as suggested by the Examiner, do not teach or suggest the features recited in independent claims 89 and 92. Claims 90 and 91 depend from claim 89; and claims 93 and 94 depend from claim 92, and recite further advantageous features which further distinguish over the document relied upon by the Examiner. Accordingly, Applicants respectfully submit that the claims are allowable.

Claims 28, 41, 43, 53, 57, 68, 80, 83 and 86

Arguments for independent claims 28, 41, 43, 53, 57, 68, 80, 83 and 86 are separately presented below.

Claim 28 is amended to distinctly identify a recorded sound effect which is separate from the three variables. Claim 28 recites, among other features, a variable associated with gain of an identified sound; a variable associated with delay of the identified sound; a variable associated with pitch of the identified sound to vary a produced sound effect; and a separately recorded sound effect, wherein said recorded sound effect has at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying, at least one of which can be adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect.

The applied references, when considered individually or in combination as suggested by the Examiner, do not teach or suggest the features recited in independent claims 28, 41, 43, 53, 57, 68, 80, 83 and 86. Accordingly, Applicants respectfully submit that the claims are allowable.

The Vanderheiden and Itoh et al. Patents

In numbered paragraph 4, pages 2-5 of the final Office Action, the Examiner variously admits that the Vanderheiden patent does not expressly teach, e.g., "wherein the at least one data structure includes a variable parameter associated with gain, delay and pitch of an identified sound to vary a produced sound effect." However, the Examiner asserts that "Itoh teaches a medium wherein an identified sound may be varied to produce different sound effects by varying one or more variable output parameters pertaining to a data structure." (See, e.g., pages 2 and 3 of the final Office Action.) Applicants respectfully traverse the Examiner's ultimate conclusion.

Claim 28 recites, among other features, a variable associated with gain of an identified sound; a variable associated with delay of the identified sound; a variable associated with pitch of the identified sound to vary a produced sound effect; and a separately recorded sound effect, wherein said recorded sound effect has at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying, at least one of which can be adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect; claim 53 recites, among other features, identifying a sound effect using a state table, said sound effect being associated with a transition from a first display state to a second display state, and varying an output characteristic of said sound effect using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of the identified sound effect to

vary the output characteristic; claim 57 recites, among other features, producing a plurality of sound segments resulting from an object's movement on a graphical user interface, the plurality of sound segments using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments; and claim 68 recites, among other features, a processor for controlling the speaker to produce a sound effect in response to movement of the object from the first display position, the sound effect having a plurality of sound segments that are each associated with the object's movement on a graphical user interface, the plurality of sound segments using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments. Claims 81, 83 and 86 likewise variously recite a respective one variable associated with an aspect of an identified sound, wherein at least one of a first sound segment for initiating said sound effect, a second sound segment which is repeatable to sustain said sound effect, and a third sound segment for decaying said sound effect can be adjusted based on the variable. The Vanderheiden patent and the Itoh et al. patent, individually or in combination as suggested by the Examiner, would not have taught or suggested at least these claimed features.

As admitted by the Examiner, and as previously argued of record, the Vanderheiden patent would not have taught or suggested a data structure including a variable associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect as recited in claim 28, and as similarly recited in claims 53, 57, 68, 80, 83 and 86.

The Itoh et al. patent does not cure the deficiencies of the Vanderheiden patent. The Itoh et al. patent relates to sound playback in a conduct-along operation, wherein sound playback and image display are changed real-time following the updated parameters (col. 5, lines 11-20). The disclosed conduct-along operation relates to control of tempo, beat timing, accent and sound volume by analyzing the conducting graphic form produced by the trajectory of a mouse cursor (col. 5, lines 41-43). The Itoh et al. patent does not relate to sound effect being adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect. Applicants have clarified in claim 28 that a separately recorded sound effect can be adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect. The Itoh et al. patent does not teach explicit variables relating to gain, delay or pitch of an identified sound so that a variable sound effect can be achieved from a separately recorded sound effect. Accordingly, the Itoh et al. patent would not have taught or suggested sound effect being adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect, as recited in claim 28, and as similarly recited in claims 53, 57, 68, 80, 83 and 86.

There is no motivation to combine the Vanderheiden patent and the Itoh et al. patent. The Vanderheiden patent is directed to a specially arranged touch screen system for people with disabilities. The Itoh et al. patent is directed to a conduct-along system that can give expression to sounds and images. There is no suggestion for one to combine with another to achieve a data structure comprising at least a variable associated with a recited aspect of an identified sound. Even if

combined as suggested by the Examiner, the Vanderheiden patent and the Itoh et al. patent would not have resulted in sound effect being adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect, as recited in claim 28, and as similarly recited in claims 53, 57, 68, 80, 83 and 86.

Thus, independent claims 28, 53, 57, 68, 80, 83 and 86 are allowable. Claim 54 depends from independent claim 53; claims 58-65 depend from claim 57; claims 69-77 depend from claim 68; claims 81 and 82 depend from claim 80; claims 84 and 85 depend from claim 83; and claims 87 and 88 depend from claim 86, and recite further advantageous features which further distinguish over the document relied upon by the Examiner.

The McKiel, Jr. and Itoh et al. Patents

On pages 6 and 7 of the Office Action, the Examiner variously admits that the McKiel patent does not expressly teach, e.g., "using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect." However, the Examiner asserts that "Itoh teaches a medium wherein an identified sound may be varied to produce different sound effects by varying one or more variable output parameters pertaining to a data structure." (See, e.g., page 6 of the final Office Action.) Applicants respectfully traverse the Examiner's ultimate conclusion.

The Itoh et al. patent does not cure the deficiencies of the McKiel patent. As previously argued, the Itoh et al. patent does not relate to sound effect being adjusted based on at least one of the variables associated with gain, delay or pitch of an identified sound to vary the produced sound effect. The Itoh et al. patent does

not teach explicit variable parameters relating to gain, delay or pitch of an identified sound so that a variable sound effect can be produced from an identified sound effect. Accordingly, the Itoh et al. patent would not have taught or suggested a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect, as recited in claim 41, and as similarly recited in claims 43 and 68.

There is no motivation to combine the McKiel patent with the Itoh et al. patent and/or the Vanderheiden patent. The Itoh et al. patent is directed to a conduct-along system that can give expression to sounds and images. The McKiel patent is directed to producing special sound effects specially adapted for a blind user. The Vanderheiden patent is directed to a specially arranged touch screen system for people with disabilities. There is no suggestion for one to combine with another to achieve a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound. Even if combined as suggested by the Examiner, the McKiel patent with the Itoh et al. patent and/or the Vanderheiden patent would not have resulted in a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect, as recited in claim 41, and as similarly recited in claims 43 and 68.

Thus, independent claims 41, 43 and 68 are allowable. Claims 69-79 depend from independent claim 68; and claims 59, 60 and 65 depend from claim 57, which claim 57 was previously argued, and recite further advantageous features which further distinguish over the document relied upon by the Examiner.

Conclusion

For the foregoing reasons, Applicants consider the application to be in condition for allowance and respectfully request notice thereof at an early date. The Examiner is encouraged to telephone the undersigned at the below-listed number if, in the Examiner's opinion, such a call would aid in the examination of this application.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By: _____


Richard J. Kim
Registration No. 48360

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620